

# SEQUENCE LISTING

<110> Wu, Hongjiang  
Crooke, Stanley T.

<120> Human RNase III And Compostions And Uses Thereof

<130> ISIS5029/ISPH-0522

<140> 09/900,425

<141> 2001-07-06

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<170> PatentIn version 3.1

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Val Gln Tyr Gln Tyr Glu Pro Pro Ser Ala Pro Ser Thr Thr Phe Ser  
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Phe Pro Pro Pro Met Pro Pro Ser Ala Gln Gly Pro Leu Pro Pro Cys  
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Val Pro Pro Cys Phe Pro Pro Met Pro Pro Pro Met Pro Cys Pro Asn  
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Met Met Pro Pro Pro Ser Met Pro His Pro Pro Pro Pro Val Met

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160

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Leu Lys His Tyr Asp Asp His Arg His Arg Asp His Ser His Gly Arg  
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Arg Ser Tyr Lys Lys Glu Tyr Lys Arg Ser Gly Arg Ser Tyr Gly Leu  
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Ser Val Val Pro Glu Pro Ala Gly Cys Thr Pro Glu Leu Pro Gly Glu  
325 330 335

Ile Ile Lys Asn Thr Asp Ser Trp Ala Pro Pro Leu Glu Ile Val Asn  
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His Ala Pro Leu Thr Asn Ile Pro Leu Cys Lys Val Ile Arg Phe Asn  
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Ile Asp Tyr Thr Ile His Phe Ile Glu Glu Met Met Pro Glu Asn Phe  
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Cys Val Lys Gly Leu Glu Leu Phe Ser Leu Phe Leu Phe Arg Asp Ile  
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Phe Pro Ile Ile Val His Phe Gly Ile Arg Pro Ala Gln Leu Ser Tyr  
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Val Leu Thr His His Ile Arg Tyr His Gln Cys Leu Met His Leu Asp  
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Lys Leu Ile Gly Tyr Thr Phe Gln Asp Arg Cys Leu Leu Gln Leu Ala  
885 890 895

Met Thr His Pro Ser His His Leu Asn Phe Gly Met Asn Pro Asp His  
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Ala Arg Asn Ser Leu Ser Asn Cys Gly Ile Arg Gln Pro Lys Tyr Gly  
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Asp Arg Lys Val His His Met His Met Arg Lys Lys Gly Ile Asn Thr  
930 935 940

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1060

1065

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Ile Met Gln Leu Val Ala Thr Glu Tyr Leu Phe Ile His Phe Pro Asp  
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His His Glu Gly His Leu Thr Leu Leu Arg Ser Ser Leu Val Asn Asn  
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Gly Leu Ala Thr Tyr Arg Thr Ala Leu Val Gln Asn Arg Asn Leu Ala  
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Thr Leu Ala Lys Asn Cys Arg Ile Asp Glu Met Leu Gln Tyr Ser His  
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Asp Pro Gln Gly Asp Arg Asp Leu Ser Phe Ile Thr Pro Thr Leu Ser  
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Thr Phe His Ala Leu Glu Glu Arg Leu Gly Ile Gln Phe Asn Asn Ile  
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Arg Leu Leu Ala Lys Ala Phe Thr Arg Arg Asn Ile Pro Asn Asn Asp  
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Leu Thr Lys Gly His Asn Gln Arg Leu Glu Trp Leu Gly Asp Ser Val  
 195 200 205

Leu Gln Leu Ile Val Ser Asp Phe Leu Tyr Arg Arg Phe Pro Tyr His  
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His Glu Gly His Met Ser Leu Leu Arg Thr Ser Leu Val Ser Asn Gln  
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Thr Gln Ala Val Val Cys Asp Asp Leu Gly Phe Thr Glu Phe Val Ile  
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Lys Ala Pro Tyr Lys Thr Pro Glu Leu Lys Leu Lys Asp Lys Ala Asp  
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Leu Val Glu Ala Phe Ile Gly Ala Leu Tyr Val Asp Arg Gly Ile Glu  
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His Cys Arg Ala Phe Ile Arg Ile Val Phe Cys Pro Arg Leu Lys His  
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Phe Ile Glu Ser Glu Lys Trp Asn Asp Ala Lys Ser His Leu Gln Gln  
 305 310 315 320

Trp Cys Leu Ala Met Arg Asp Pro Ser Ser Ser Glu Pro Asp Met Pro  
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Glu Tyr Arg Val Leu Gly Ile Glu Gly Pro Thr Asn Asn Arg Ile Phe  
340 345 350

Lys Ile Ala Val Tyr Tyr Lys Gly Lys Arg Leu Ala Ser Ala Ala Glu  
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Ser Asn Val His Lys Ala Glu Leu Arg Val Ala Glu Leu Ala Leu Ala  
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Ile Arg Lys Leu Met Phe Ala Met Lys Ala Leu Leu Glu Glu Thr Lys  
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His Ser Thr Lys Asp Asp Val Asn Leu Val Ile Pro Gly Ser Thr Trp  
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Ser His Ile Glu Gly Val Tyr Glu Met Leu Lys Ser Arg His Asp Arg  
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Lys Asn Gln Glu Asn Asn Glu Pro Thr Ser Glu Glu Phe Glu Glu Gly  
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Glu Tyr Pro Pro Pro Leu Pro Pro Leu Arg Ser Glu Lys Leu Lys Glu  
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Gln Val Phe Met His Ile Ser Arg Ala Tyr Glu Ile Tyr Pro Asn Gln  
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Ser Asn Pro Asn Glu Leu Leu Asp Ile His Asn Glu Arg Leu Glu Phe  
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Leu Gly Asp Ser Phe Phe Asn Leu Phe Thr Thr Arg Ile Ile Phe Ser  
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Lys Phe Pro Gln Met Asp Glu Gly Ser Leu Ser Lys Leu Arg Ala Lys  
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Phe Val Gly Asn Glu Ser Ala Asp Lys Phe Ala Arg Leu Tyr Gly Phe  
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Asp Lys Thr Leu Val Leu Ser Tyr Ser Ala Glu Lys Asp Gln Leu Arg  
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Lys Ser Gln Lys Val Ile Ala Asp Thr Phe Glu Ala Tyr Leu Gly Ala  
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Lys Leu Ala Lys Ser Lys Leu Phe His Lys Tyr Ser Thr Leu Gly His  
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Val Ile Gln Leu Glu His Ala Val Thr Lys Leu Val Glu Ser Tyr Asn  
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Lys Ile Ile Glu Leu Ser Pro Asn Leu Val Ala Tyr Asn Glu Ala Val  
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Asn Asn Gln Asp Arg Val Pro Val Gln Ile Leu Pro Ser Leu Ser Arg  
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Tyr Gln Leu Lys Leu Ala Ala Glu Leu Lys Thr Leu His Asp Leu Lys  
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Lys Asp Ala Ile Leu Thr Glu Ile Thr Asp Tyr Glu Asn Glu Phe Asp  
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Thr Glu Gln Lys Gln Pro Ile Leu Gln Glu Ile Ser Lys Ala Asp Met  
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Glu Lys Leu Glu Lys Leu Glu Gln Val Lys Arg Glu Lys Arg Glu Lys  
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Glu Asp Glu Gly Glu Asp Ser Tyr Asp Pro Thr Lys Ala Gly Asp Ile  
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Val Lys Ala Thr Lys Trp Pro Pro Lys Leu Pro Glu Ile Gln Asp Leu  
 195 200 205

Ala Ile Arg Ala Arg Val Phe Ile His Lys Ser Thr Ile Lys Asp Lys  
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Val Tyr Leu Ser Gly Ser Glu Met Ile Asn Ala His Asn Glu Arg Leu  
225 230 235 240

Glu Phe Leu Gly Asp Ser Ile Leu Asn Ser Val Met Thr Leu Ile Ile  
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Tyr Asn Lys Phe Pro Asp Tyr Ser Glu Gly Gln Leu Ser Thr Leu Arg  
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Met Asn Leu Val Ser Asn Glu Gln Ile Lys Gln Trp Ser Ile Met Tyr  
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Ala Thr Arg Asn Gln Val Ala Leu Glu Lys Thr Asp Lys Leu Asp Met  
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Asn Ala Lys Arg Gln Leu Tyr Ser Leu Ile Gly Tyr Ala Ser Leu Arg  
370 375 380

Leu His Tyr Val Thr Val Lys Lys Pro Thr Ala Val Asp Pro Asn Ser  
385 390 395 400

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Gly Arg Asn Ile Lys Ile Ala Gly Ile Arg Ala Ala Glu Asn Ala Leu  
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Arg Asp Lys Lys Met Leu Asp Phe Tyr Ala Lys Gln Arg Ala Ala Ile  
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Ser Ser Lys His Asn Glu Arg Leu Glu Phe Leu Gly Asp Ser Ile Leu  
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Ser Tyr Val Ile Ala Asn Ala Leu Tyr His Arg Phe Pro Arg Val Asp  
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Glu Gly Asp Met Ser Arg Met Arg Ala Thr Leu Val Arg Gly Asn Thr  
 65 70 75 80

Leu Ala Glu Leu Ala Arg Glu Phe Glu Leu Gly Glu Cys Leu Arg Leu  
 85 90 95

Gly Pro Gly Glu Leu Lys Ser Gly Gly Phe Arg Arg Glu Ser Ile Leu  
 100 105 110

Ala Asp Thr Val Glu Ala Leu Ile Gly Gly Val Phe Leu Asp Ser Asp  
 115 120 125

Ile Gln Thr Val Glu Lys Leu Ile Leu Asn Trp Tyr Gln Thr Arg Leu  
 130 135 140

Asp Glu Ile Ser Pro Gly Asp Lys Gln Lys Asp Pro Lys Thr Arg Leu



145

150

155

160

Gln Glu Tyr Leu Gln Gly Arg His Leu Pro Leu Pro Thr Tyr Leu Val  
 165 170 175

Val Gln Val Arg Gly Glu Ala His Asp Gln Glu Phe Thr Ile His Cys  
 180 185 190

Gln Val Ser Gly Leu Ser Glu Pro Val Val Gly Thr Gly Ser Ser Arg  
 195 200 205

Arg Lys Ala Glu Gln Ala Ala Ala Glu Gln Ala Leu Lys Lys Leu Glu  
 210 215 220

Leu Glu  
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His Asn Glu Arg Leu Glu Phe Leu Gly Asp Ser  
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40

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27

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tgtcagtttg tttgactttg ggacta

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Cys Arg Ser Asp Tyr Asp Arg Gly Arg Thr Pro Ser Arg His Arg Ser  
1 5 10 15

Tyr Glu Arg Ser

20

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Cys Arg Trp Glu Arg Glu His Gln Glu Arg Glu Pro Asp Glu Thr Glu  
1 5 10 15

Asp Ile Lys Lys  
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Asn Pro Asp His Ala Arg Asn Ser Leu Ser Asn Cys Gly Ile Arg Gln  
1 5 10 15

Pro Lys Tyr Gly Asp Arg Lys Val His His Met His Met Arg Lys Lys  
20 25 30

Gly Ile Asn Thr Leu Ile Asn Ile Met Ser Arg Leu Gly Gln Asp Asp  
35 40 45

Pro Thr Pro Ser Arg Ile Asn His Asn Glu Arg Leu Glu Phe Leu Gly  
50 55 60

Asp Ala Val Val Glu Phe Leu Thr Ser Val His Leu Tyr Tyr Leu Phe  
65 70 75 80

Pro Ser Leu Glu Glu Gly Gly Leu Ala Thr Tyr Arg Thr Ala Ile Val  
85 90 95

Gln Asn Gln His Leu Ala Met Leu Ala Lys Lys Leu Glu Leu Asp Pro  
100 105 110

Phe Met Leu Tyr Ala His Gly Pro Asp Leu Cys Arg Glu Ser Asp Leu  
115 120 125

Arg His Ala Met Ala Asn Cys Phe Glu Ala Leu Ile Gly Ala Val Tyr  
130 135 140

Leu Glu Gly Ser Leu Glu Glu Ala Lys Gln Leu Phe Gly Arg Leu Leu  
145 150 155 160

Phe Asn Asp Pro Asp Leu Arg Glu Val Trp Leu Asn Tyr Pro Leu His  
165 170 175

Pro Leu Gln Leu Gln Glu Pro Asn Thr Asp Arg Gln Leu Ile Glu Thr  
180 185 190

Ser Pro Val Leu Gln Lys Leu Thr Glu Phe Glu Glu Ala Ile Gly Val  
195 200 205

Ile Phe Thr His Val Arg Leu Leu Ala Arg Ala Phe Thr Leu Arg Thr  
210 215 220

Val Gly Phe Asn His Leu Thr Leu Gly His Asn Gln Arg Met Glu Phe  
225 230 235 240

Leu Gly Asp Ser Ile Met Gln Leu Val Ala Thr Glu Tyr Leu Phe Ile  
245 250 255

His Phe Pro Asp His His Glu Gly His Leu Thr Leu Leu Arg Ser Ser  
260 265 270

Leu Val Asn Asn Arg Thr Gln Ala Lys Val Ala Glu Glu Leu Gly Met  
275 280 285

Gln Glu Tyr Ala Ile Thr Asn Asp Lys Thr Lys Arg Pro Val Gly Leu  
290 295 300

Arg Thr Lys Thr Leu Ala Asp Leu Leu Glu Ser Phe Ile Ala Ala Leu  
305 310 315 320

Tyr Thr Asp Lys Asp Leu Glu Tyr Val His Thr Phe Met Asn Val Cys  
325 330 335

Phe Phe Pro Arg Leu Lys Glu Phe Ile Leu Asn Gln Asp Trp Asn Asp  
340 345 350

Pro Lys Ser Gln Leu Gln Gln Cys Cys Leu Thr Leu Arg Thr Glu Gly  
355 360 365



Lys Glu Pro Asp Ile Pro Leu Tyr Lys Thr Leu Gln Thr Val Gly Pro  
370 375 380

Ser His Ala Arg Thr Tyr Thr Val Ala Val Tyr Phe Lys Gly Glu Arg  
385 390 395 400

Ile Gly Cys Gly Lys Gly Pro Ser Ile Gln Gln Ala Glu Met Gly Ala  
405 410 415

Ala Met Asp Ala Leu Glu Lys Tyr Asn Phe Pro Gln Met Ala His Gln  
420 425 430

Lys Arg Phe Ile Gly Arg Lys Tyr Arg Gln Glu Leu Lys Glu Met Arg  
435 440 445

Trp Glu Arg Glu His Gln Glu Arg Glu Pro Asp Glu Thr Glu Asp Ile  
450 455 460

Lys Lys  
465